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TIDBITS

Tips and Helpful Links

Keyboarding and the New Assessments

Although we don't know which assessment our State Board of Education will choose to evaluate how well Arizona students have mastered ACCR Standards next spring, we can glean some general information from the KeyValues document adopted by the Board. This text gives the reader a clear indication of the desired test features being sought as they evaluate various vendor products and capabilities. One thing is clear – Arizona will be increasingly moving toward computer-based assessments as districts demonstrate their infrastructure capacity.

As special educators, we're excited about the technology-based accessibility features and accommodations, long overdue, that will provide students with special needs the access which will allow them to demonstrate what they know and can do at grade level. But inadequate preparation for the use of technology can backfire, creating new barriers instead of the desired access intended.

An important aspect of preparation for computer-based testing, beginning as early as grade 3, is increasing dexterity with keyboarding. In both ELA and math, students will be composing responses using the keyboard.

> CCSS.ELA-Literacy.**W.4.6**
> With some guidance and support from adults, use technology, including the Internet, to produce and publish writing as well as to interact and collaborate with others; **demonstrate sufficient command of keyboarding skills to type a minimum of one page in a single sitting.**

For fifth and sixth grade ELA, these expectations advance to 2, then 3 pages respectively, with a time element attached. While some general education students may become adept with the multi-faceted task of planning, composing, editing, and producing a final typed product in a timely fashion, many of our special education students, even when afforded additional time, will find this a challenging task. These students often struggle with working memory issues – maintaining and manipulating several task requirements in the brain simultaneously. In addition, we might anticipate a fatigue factor resulting from prolonged "hunt and peck" attempts to enter information through keyboarding.

Preliminary studies indicate that typed student writing samples are significantly shorter compared with those composed with paper and pencil. It's not yet clear whether this is attributable to lack of keyboarding fluency. Consequently, without regular incorporation of technology into daily lessons, including tasks that require keyboarding, the inclusion of tech tools in assessment may have the unintended outcome of presenting new barriers to expression.

> "The exams — which will be given in 2014-2015 — require students to be able to manipulate a mouse; click, drag and type answers on a keyboard; and, starting in third grade, write online.
> Third-graders will be asked to write three short pieces, according to Laura Slover, who heads one of two consortia that are designing the tests. They will read a nonfiction selection and a literary passage and write about each, and they will be asked to write a story based on a real or imaginary experience," Slover said.
>
> "Writing is a critical skill, and young students should have the opportunity to write frequently about meaningful topics," Slover said. And when the writing tests are administered online, that means the students will be using a keyboard."
>
> "On the Common Core assessments, some of these writings are going to be document-based questions or sorting through different types of text," Regan said. "The last thing you want is for the kids to be struggling with the mechanical skills."

Source: http://www.washingtonpost.com/local/education/elementary-students-learn-keyboard-typing-ahead-of-new-common-core-tests/2013/10/13/d329ba66-3289-11e3-9c68-1cf643210300_story.html

The need for keyboarding skills extends to math as well. Students will be required to use an equation editor for some items to show their work. In addition, they will be explaining their thought processes in words to justify their procedures and solutions. Routine methods for this type of response should be established to ensure successful engagement during assessments – but also for later success in college and career fields where evidence is highly valued.

When do we begin to teach keyboarding skills? There's a wide range of opinion being expressed by teachers are who are weighing in on this issue. Some claim that students are not developmentally ready in second and third grade while others claim that teaching keyboarding in place of print or cursive will enable students with fine motor issues to skip the frustration of attempting to encode their thoughts manually. Regardless of where individuals stand on the issue, the spring assessments will feature items that require keyboard responses, so we'll need to spend this school year incorporating those skills in preparation for rising expectations at successive grade levels. Keyboarding is no longer even mentioned in the standards after sixth grade, indicating that the standards' authors assume that fluency will be in place at that point.

Articles and blog posts emphasize that regardless of when keyboarding instruction begins, it's important that teachers insist on proper finger placement and memorization of key positions to avoid the development of poor habits that will be difficult to correct.

> Let me explain: keyboarding is a muscle-memory skill, like riding a bicycle. The first time you use the keyboard, the brain co-ordinates all the perceptive, cognitive and physical brain cells needed to do this activity. When you repeat this activity over and over, the brain cells involved reach out and connect with each other forming a neural pathway which, eventually, becomes part of your brain.
>
> It's the continual and constant "doing" of keyboarding that builds the muscle memory required for students to keyboard automatically without thinking about it. You can't be half-hearted, you need to throw yourself into it and give it all you've got. It's only for a short space of time and the reward at the end is amazing. Once you attain "automaticity", you can't forget this skill, even if you try, you've got it for life! How good is that?

Above Source: blog post: http://www.teachingthecore.com/keyboarding-skills-and-the-common-core/

For those teachers planning to include a keyboarding IEP goal, the following formula is offered:

How fast should kids type?

As a general rule, keyboarding skills should be measured as "5 words per minute (wpm) x grade level".

Source: http://bit.dpi.wi.gov/bit_keyboarding

This is not intended for composing, but perhaps more appropriate for transcribing from an edited to a final version. For a student with special needs this formula serves as a reference point to begin considering an appropriate goal.

Handwriting Without Tears has come up with grade level standards for keyboarding that may help identify key ideas and elements to use in instruction and a progression of skills to guide teachers. A wealth of instructional programs for keyboarding can be found online with a simple Google search. Blogs recommend programs with game formats, but careful evaluation is needed to ensure that they encourage proper finger placement and memorization of key positions. Modified keyboards are available for students with specific needs and many are available for trial use through ADE's AT lending library located at NAU .

As we advocate for successful inclusion of our students with special needs in technology-delivered assessments, we need to be sure that we, as a collective school community, are mindful of the potential for new difficulties our students may encounter. Reliance on weekly keyboarding practice sessions in the computer lab will not provide adequate preparation. By incorporating regular use of tools and keyboarding in daily instruction at the start of the school year we will better position them to engage in assessments, freeing up their minds to focus on the evaluative tasks at hand. In the larger sense, we will be fostering valuable life-long skills. For information on findings from field testing and studies on related topics, check the following links:

http://www.edweek.org/ew/articles/2014/05/06/30fieldtest_ep.h33.html

http://blogs.edweek.org/edweek/curriculum/2014/08/4th_graders_struggle_with_icon.html

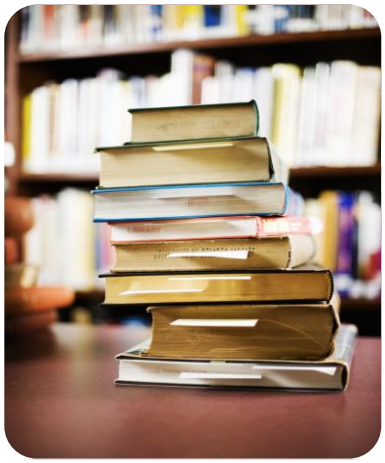
NCSC Pilot 2 – Important Dates

August 18 – September 16: Register eligible students
September 15 – 26: Teachers receive login information to access training modules
September 29: Begin access to training modules
October 20 – November 14: Test window for Pilot 2

How well do the materials and assessments you're using align with Arizona's College and Career Ready Standards? To find out, try out the tools provided at the link below:

- The IMET includes criteria for access to the standards for all students – important information for general and special education teachers to consider when selecting texts and supplementary materials that will meet a wide range of needs.
- The EQuIP Rubric guides and evaluates lesson development, including a section on instructional supports to ensure lessons are accessible to a broad spectrum of students.
- The Assessment Evaluation Tool considers accessibility features while maintaining construct validity.

http://achievethecore.org/page/285/materials-alignment-toolkit-list-pg



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